

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. (Previously Presented) A device for controlling a piezoelectric actuator, for use in a fuel injection valve of an internal combustion engine, said device comprising an energy source to supply the actuator with energy, wherein an extension of the actuator corresponds with a predetermined response to changes in temperature, and a capacitor is connected in parallel with the actuator wherein the capacitance is such that for a constant amount of energy delivered by the energy source, extension of the actuator is almost constant across a temperature range.
2. (Previously Presented) A device according to Claim 1, wherein the energy source, a controller controlling the energy source and a compensation capacitor are accommodated in a housing and are connected via a cable with the piezoelectric actuator.
3. (Previously Presented) A device in accordance with Claim 1, wherein the energy source, a control circuit controlling the energy source, the compensation capacitor, and the piezoelectric actuator are accommodated in a housing, whereby the control circuit can be controlled by an external controller.
4. (Previously Presented) A device in accordance with Claim 1, wherein the compensation capacitor has a capacitance of around 10,5 μ F.
5. (Previously Presented) A device according to Claim 3, wherein the housing is a fuel injection valve housing.

6. (Previously Presented) A device according to Claim 3, further comprising a temperature sensor coupled with the external controller for determining the temperature of the housing.

7. (Previously Presented) A device according to Claim 2, further comprising a measurement line coupled with the controller and the actuator used to determine the voltage at the actuator.

8. (Previously Presented) A device according to Claim 2, further comprising a temperature sensor coupled with the actuator and electrically coupled with a measurement line used to transmit the temperature value of the actuator to the controller.

9. (Previously Presented) A method for controlling a piezoelectric actuator, for use in a fuel injection valve of an internal combustion engine, said method comprising the steps of:

- supplying the actuator with energy, wherein an extension of the actuator corresponds with a predetermined response to changes in temperature, and

- compensating the extension of the actuator via a capacitor coupled in parallel with the actuator, wherein the capacitance is dimensioned in such a way that for a constant amount of energy delivered by an energy source, extension of the actuator is almost constant across a temperature range.

10. (Previously Presented) A method according to Claim 9, further comprising the step of sensing the voltage of the actuator.

11. (Previously Presented) A method according to Claim 9, further comprising the step of sensing the temperature of the actuator.

12. (Previously Presented) A fuel injection valve comprising:
- a piezoelectric actuator;
- an energy source to supply the actuator with energy, whereby an extension of the actuator corresponds with a predetermined response to changes in temperature, and
- a capacitor connected in parallel with the actuator wherein the capacitance is such that for a constant amount of energy delivered by the energy source the extension of the actuator is almost constant across a temperature range.

13. (Previously Presented) A valve according to Claim 12, wherein the energy source, a controller controlling the energy source and a compensation capacitor are accommodated in a housing and are connected via a cable with the piezoelectric actuator.

14. (Previously Presented) A valve in accordance with Claim 12, wherein the energy source, a control circuit controlling the energy source, the compensation capacitor, and the piezoelectric actuator are accommodated in a housing, whereby the control circuit can be controlled by an external controller.

15. (Previously Presented) A valve in accordance with Claim 12, wherein the compensation capacitor has a capacitance of around $10,5\mu\text{F}$.

16. (Previously Presented) A valve according to Claim 14, wherein the housing is the housing of the fuel injection valve.

17. (Previously Presented) A valve according to Claim 14, further comprising a temperature sensor coupled with the external controller for determining the temperature of the housing.

18. (Previously Presented) A valve according to Claim 13, further comprising a measurement line coupled with the controller and the actuator used to determine the voltage at the actuator.

19. (Previously Presented) A valve according to Claim 13, further comprising a temperature sensor coupled with the actuator and electrically coupled with a measurement line used to transmit the temperature value of the actuator to the controller.

20. (Currently Amended) A device for controlling a piezoelectric actuator for use in a fuel injection valve of an internal combustion engine, said device comprising:

an energy source to supply energy to the actuator,

a controller for controlling the energy source,

a measurement line coupled with the controller and actuator to determine a voltage at the actuator, and

a compensation capacitor connected in parallel with the actuator having a capacitance such that for a constant amount of energy delivered by the energy source, an extension of the actuator is almost constant across a temperature range, wherein the energy source, the controller, and the capacitor are accommodated in a housing and connected via a cable with the actuator.

21. (Currently Amended) A method for controlling a piezoelectric actuator for use in a fuel injection valve of an internal combustion engine, said method comprising the steps:

supplying the actuator with energy, wherein an extension of the actuator corresponds with a predetermined response to changes in temperature,

compensating the extension of the actuator via a capacitor coupled in parallel with the actuator, said capacitor having a capacitance wherein for a constant amount of energy delivered by an energy source, the extension of the actuator is almost constant across a temperature range, and

sensing the voltage of the actuator.

22. (Currently Amended) A fuel injection valve comprising:

a piezoelectric actuator,

an energy source to supply the actuator with energy, wherein an extension of the actuator corresponds with a predetermined response to changes in temperature,

a controller for controlling the energy source,
a compensation capacitor connected in parallel with the actuator having a
capacitance such that for a constant amount of energy delivered by the energy source,
extension of the actuator is almost constant across a temperature range, and
a measurement line coupled with the actuator used to determine the voltage at the
actuator, wherein the energy source, the controller, and the capacitor are accommodated in a
housing and connected via a cable with the actuator.